



Deakin University Submission

Senate Select Committee into Jobs for the Future in Regional Areas

September 2019

Select responses to the Terms of Reference:

(a) New industries and employment opportunities that can be created in the regions

Technological advances and global connectivity have ensured that organisations are no longer limited by where they are located or the size of the local economy. The viability of new and existing industries in the regions is dependent upon having access to the required skills and expertise, and higher education providers such as Deakin have a key role to play. Deakin University welcomes the opportunity to support new and existing industries in regional areas, build new skills pipelines and upskill their existing workforce.

The major drivers of change such as automation, globalisation, artificial intelligence (AI), robotics, big data, energy security, climate change and aging will continue to present opportunities and threats across most industries. Employment opportunities that align with these trends include specialised technology focused roles such as cyber security engineers, AI specialists, big data experts, autonomous vehicle designers, 3D printing specialists, renewable energy professionals and digital communications specialists, emerging health and wellbeing focused roles as well transdisciplinary roles focused on complex global challenges.

In Western Victoria existing industries that are being modernised are already creating new employment opportunities and include solar energy, rail and rolling stock, electric vehicles, digital infrastructure, fisheries and aquaculture, agriculture and food processing. Existing professional skills that are essential for every community and local economy including teaching, health services, accounting, financial planning, legal, aged care, social assistance and community services will also continue to be in demand. Deakin University's Centre for Regional Rural Futures is undertaking the Economic Futures project for South West Victoria, which is identifying high-value economic pathways that will drive new wealth creation and high productivity jobs for the region (final report to be completed in October 2019). Deakin's major research programs in improving health and wellbeing, designing smarter technologies and enabling a sustainable world all align strongly with high priority industries for the regions. In addition to creating and disseminating new knowledge, these high impact research programs also develop emerging skills and create future jobs.

While the South West region's local economy is relatively stable, it must develop medium to long term plans on how it will support existing jobs and create new employment opportunities, increase education attainment levels, attract and retain industries and achieve a targeted level of population growth. All of these objectives are interdependent. One of the outcomes sought from Deakin's Economic Futures project is to establish a future employment profile for the region that adds to the depth and breadth of high value, high yield jobs. Projections for the region estimate an additional 2,500 unfilled jobs over the next three to five years. Most of these jobs are at a vocation level, which is critical for employers to be able to meet their base operational requirements. These projections also reinforce the need for higher value jobs and strategies to attract and retain skilled professionals, such as teachers and healthcare workers to the regions. Deakin's Regional Skills program, run by DeakinTALENT, enables employers to tap into graduate talent from all Deakin campuses rather than relying on only regional graduates. This program offers a free recruitment agency service to employers seeking to fill short-term and long-term skills requirements by

identifying, developing and shortlisting candidates for vacancies and supports Deakin graduates selected for these roles to relocate to the region.

A key element often missing from consideration in regional areas is the impact of digital disruption, not just as a concern but through the opportunities presented to make local businesses and industries more competitive in a global marketplace. Digital connectivity removes one of the major barriers to operating in rural and regional locations by enabling organisations to tap into distant markets rather than being limited by their local economy. Advances in technology also present an opportunity to advance industries by creating new products and services, and gaining step changes in scalability. Deakin's research programs in advanced manufacturing, intelligent systems, composite materials and data science are well positioned to support regional industries to take advantage of the digital disruption.

To maintain a sound local economy and an appropriate level of community services, it is critical that new industries are supported as they establish and build scale. Importantly, existing industries must also be supported to expand and grow to build confidence in the region, encouraging new investment and attracting new workers. Regions also need to present a value proposition that goes beyond lifestyle and cost of living to attract and retain families.

In addition, it is vital that there are the educational opportunities for individuals to equip themselves for a new or modified career, given the very rapid rate of change. Deakin is well positioned to support this given our on-line and short credentials experience.

(b) The number of existing jobs in regional areas in clean energy technology and ecological services and their future significance

South West Victoria has very strong renewable energy credentials, particularly for wind power generation. The region has identified renewable energy as a key sector moving forward and this is recognised by key stakeholder organisations. The main investment to date has been with wind tower construction and solar generation, and existing jobs in this sector are mostly technical and associated trade roles. There are significant potential opportunities for the region to have a distinct capability in research and development of renewable energy storage and clean energy technology through Deakin University that would result in the creation of new jobs, including in research and innovation. Deakin's current research collaboration with China's Dongfang Turbine Company to create efficient composite materials for wind turbines and the work of another research team exploring the use of graphene to extract hydrogen from water are good examples of new knowledge and expertise in clean energy already being created in Western Victoria. However, there would need to be more certainty in policies relating to clean energy technology to encourage future investment by private industry.

(c) Lessons learned from structural adjustments in the automotive, manufacturing and forestry industries and energy privatisation and their impact on labour markets and local economies

The lessons learnt from structural adjustments in key industries are particularly relevant to the South West region. Whilst it is unlikely there will be a major disruption in the local economy as has occurred in locations such as Geelong, the rate of change across all industry sectors as well as global and local markets will continue to impact all economies. The transformation of Geelong over the past decade from a critical manufacturing hub to a creative, innovative economy resulted from the combined efforts of Federal and State Governments, local business and industry including Deakin University as well as the local community. Deakin University's investment in cutting edge research and development combined with Geelong's start-up ecosystem has helped the region build a reputation as an innovation hub, and has recently been recognised by UNESCO as Australia's City of Design.

Unless local industries have the capability and resilience to respond to emerging disruptions, regional areas are particularly susceptible to economic downturn and loss of jobs. Regional communities need to be supported in developing medium term economic blue prints to attract new public and private investment

and plan for employment growth and education and training requirements informed by workforce development planning.

(d) The importance of long-term planning to support the diversification of supply chain industries and local economies

Regions that do not have a future vision and long term plans for economic and population growth, workforce development and infrastructure needs will be forced to be reactive. There are significant lead times required for developing and establishing new industries and having the enablers and resources in place, including education and training to develop talent pipelines. It is also important that these plans are developed jointly with key stakeholders and Deakin University would welcome the opportunity to contribute to this process, particularly in regions across Western Victoria.

Key areas of planned Government investment in Western Victoria in the coming years include rail, defence, energy, materials and health, and in most cases there is a strong emphasis on 'local content' provisions and ensuring there is a healthy supply chain that links to training and development opportunities for new workers.

(e) Measures to guide the transition into new industries and employment, including:

(i) community infrastructure to attract investment and job creation

It is essential that there are adequate health and education services provided in the region as well as availability of affordable housing to support the attraction and retention of a workforce. Connectivity, both digital and transport links, are also essential infrastructure to attract investment and job creation.

(iii) meaningful community consultation to guide the transition

Strong local engagement is a key success factor in a transition as it essentially is a change management process. Early and deep buy-in from the local community will assist with the effectiveness of the change. This community engagement may continue for some time as they have practical understanding of what is happening, when, why and how it may impact them on a personal level. There must be a significant investment in this consultation process so that the community believes it is genuine. There is also the need for high quality information for both the community and industry to ensure that the feedback received is relevant and constructive.

(iv) the role of vocational education providers, including TAFE, in enabling reskilling and retraining

From the beginning of discussions, education providers need to be involved. There is a tendency to leave the reskilling and retraining requirements to the end which is too late to ensure skilled workers are available in the region. Education providers need lead time to develop programs and resources and will be able to provide valuable guidance to all stakeholders, particularly industry throughout the transition. When employers are considering moving to a new location/region, the availability of a local skilled and educated workforce will be a very high priority for them. Education attainment levels and attracting students to essential professions such as Teaching are a very high priority.